

Installation, Operation & Maintenance Manual CKE Series Kitchen Exhaust fans

General Information

This service manual covers the installation Operation and maintenance of the CKE Direct drive Kitchen Exhaust Fans. Please read the Manual thoroughly before Installation

Basic Unit:

Caryaire make CKE direct drive Kitchen Exhaust Fans Consists of a Aluminium profile casing with Pre painted double skin PUF insulated panels and three phase 415 AC Volt motor and blower assembly.



Direct Drive Kitchen Exhaust Fans.

Models

CKE-355
CKE-400
CKE-450
CKE-500
CKE-560
CKE-630

Unit Casing:

Unit cabinets are manufactured from pre painted steel sheet with double skin 25mm PUF insulated panels and aluminium profiles. Inlet /outlet spigots are a standard feature of all CKE models. Fixing channels and access panels are also a Standard Feature.

Fan Blower:

Plug fans are used in kitchen exhaust. Fan Blower is made from Powder coated steel. Fan Blower has Backward curved Blades made of Powder coated steel. Fan Blower is dynamically balanced as per ISO1940 G6.3.

Fan Motor:

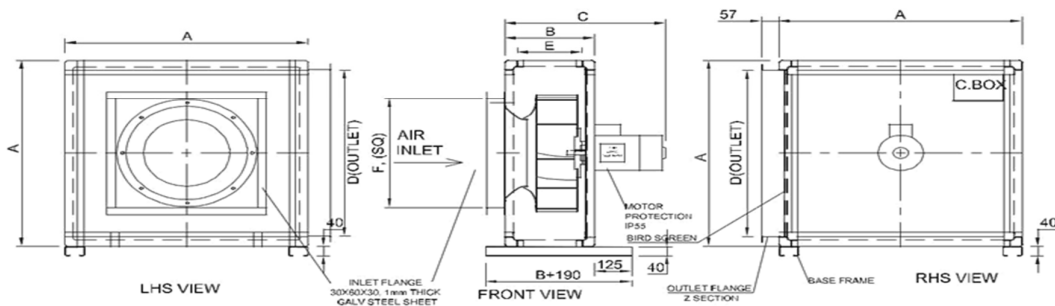
Fan motors are IE2 of class and Compatible for use with VFD. Motors have permanently lubricated Ball Bearings and are tested in-house before dispatch.

MOTOR RATING						
Model	Poles	Power KW/HP	Hz	CL	Phase/Voltage	Max, Amp.
CKE-355	4	0.55/0.75	50	F	3/415	1.4
CKE-400	4	0.55/0.75	50	F	3/415	1.4
CKE-450	4	0.75/1.0	50	F	3/415	1.7
CKE-500	4	1.1/1.5	50	F	3/415	2.4
CKE-560	4	2.2/3.0	50	F	3/415	4.7
CKE-630	4	3.7/5.0	50	F	3/415	7.4

Fan Model CKE-355,400,450,500,560,630

Aluminum Skin Cabinet suitable for Outdoor Applications
with Airfoil Impeller

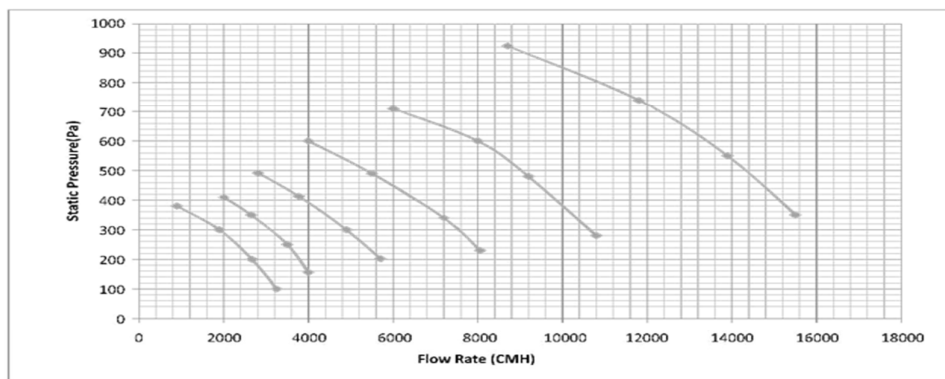
GA DRAWING :



TECHNICAL & DIMENSIONAL DETAIL:-

Unit Model	CMH	STATIC (mm)	MOTOR POLE	KW	Motor Power (kw)	A	B	C	OUTLET D x E	INLET F(SQ)
CKE-355	1200	36	4	0.55	3/415	635	245	563	551 161	380
CKE-400	2000	40	4	0.55	3/416	700	275	586	616 191	425
CKE-450	3200	46	4	0.75	3/417	780	300	667	696 216	475
CKE-500	5400	50	4	1.1	3/418	870	327	694	786 243	525
CKE-560	8000	60	4	2.2	3/419	965	359	704	881 275	585
CKE-630	13400	60	4	3.7	3/420	1075	400	854	991 316	655

* All dimensions are in mm.



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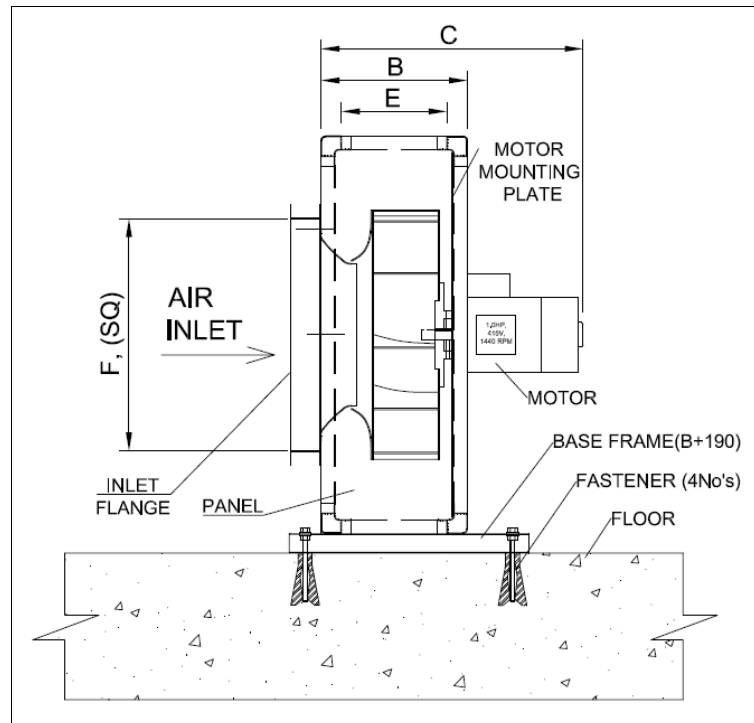
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All Stated specifications are subject to change without notice Rev 08/April /2019

Technical Data

PARAMETER	DATA					
1. Manufacturer	CARYAIRE EQUIPMENTS (I) PVT. LTD.					
2. Model No.	CKE-355	CKE-400	CKE-450	CKE-500	CKE-560	CKE-630
3. Type of Unit	Kitchen Exhaust FAN	Kitchen Exhaust FAN	Kitchen Exhaust FAN	Kitchen Exhaust FAN	Kitchen Exhaust FAN	Kitchen Exhaust FAN
4. Overall dimension mm.	635X245X563	700X275X586	780X300X667	870X327X694	965X359X704	1075X400X854
5. Fan inlet dimension mm.	380X380	425X425	475X475	525X525	585X585	655X655
6. Fan inlet area (sqm)	0.14	0.18	0.23	0.28	0.34	0.43
7. Fan outlet dimension mm.	551X161	616X191	696X216	786X243	881X275	991X316
8. Fan outlet area (sqm)	0.09	0.12	0.15	0.19	0.24	0.31
5. Approx. weight	43	57	72	98	127	158
6. Material of construction	P.P GSS	P.P GSS	P.P GSS	P.P GSS	P.P GSS	P.P GSS
7. Air quantity : (CMH)	1200	2000	3200	5400	8000	13400
8. Total static pressure mm)	36	40	46	50	60	60
9).Fan outlet velocity (m/sec)	2.6	3.4	4.3	5.8	6.9	9.2
10. Fan speed (rpm)	1400	1400	1410	1420	1400	1450
11. Fan motor (hp)	0.75	0.75	1.0	1.5	3.0	5.0
12. Fan wheel dia. (mm)	355	400	450	500	560	630
13. Balancing (static and/or dynamic)	DYNAMIC BALANCE - ISO1940 G6.3	DYNAMIC BALANCE - ISO1940 G6.3	DYNAMIC BALANCE - ISO1940 G6.3	DYNAMIC BALANCE - ISO1940 G6.3	DYNAMIC BALANCE - ISO1940 G6.3	DYNAMIC BALANCE - ISO1940 G6.3
14. Material of Construction	POWDER COATED GALVANIZED STEEL					
15. Drive Arrangement	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
Material						
16. Fan wheel	POWDER COATED GALVANIZED STEEL					
17. Blade						
18. Fan Inlet area (sq.m)	0.1444	0.1806	0.2256	0.2756	0.3422	0.4290

Installation .



- 1) Unit should be checked for shipping damage.
- 2) Allow adequate space for the unit and free area for service clearance.
- 3) Before Installing any unit make sure proper preparation has been made at each unit location for proper electrical connections.
- 4) Check that the supporting structure is strong enough to support the unit operating weight.

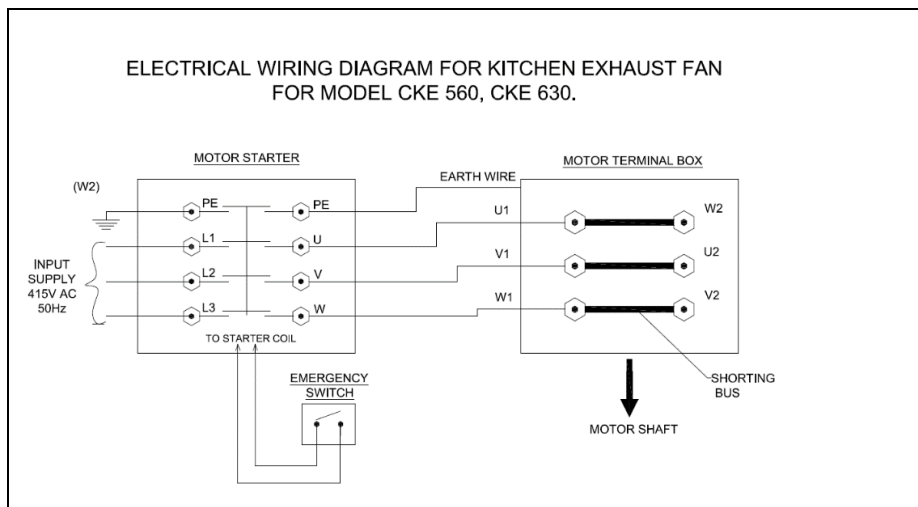
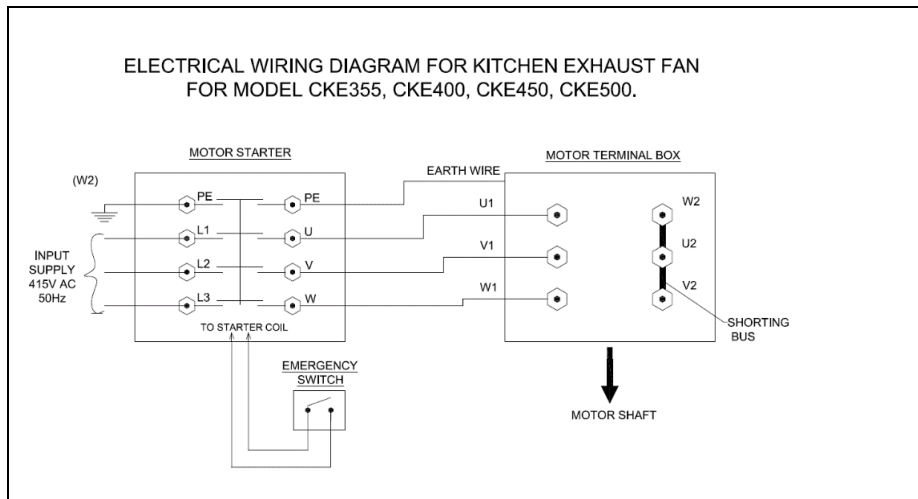
Mounting:

The unit gravity placed at the roof top. Base channels with unit may be placed and fixed at the designated place fixed by customer.

- 1) Fasteners to be place for fixing the unit.
- 2) Hoist the Unit into position.
- 3) Due to heavy weights ensure safety of all nearby installation.
- 4) Level the unit by checking on the unit casing.

Electrical Connections

- 1) For wiring refer to the wiring diagram
- 2) Grounding point must be properly connected to the building grounding system.



Installation check list (Before Start Up.)

- 1) Unit is mounted securely to base channel with fasteners.
- 2) Electrical connections are completed.
- 3) Check the blower by rotating manually for any obstruction.

Start Up/Operation

- 1) Before starting the unit, complete the Installation Check list.
- 2) Switch on the power supply through the Main power source.
- 3) Switch on the starter.
- 4) Check that the fan motor current (AMPs.)

Periodic Maintenance

- 1) Inspect the unit casing for corrosion. Clean or repair to provide unit protection.
- 2) Inspect Fan wheel and housing for damage.
- 3) Rotate the fan wheel manually to ensure that no obstructions are blocking the fan movement.
- 4) Tighten all electric connections.
- 5) Check unit mounting fasteners must be properly tight.